

UNITED STATES DISTRICT COURT  
DISTRICT OF NEW JERSEY

VIKING YACHT COMPANY, a New :  
Jersey Corporation; and POST :  
MARINE CO., INC., a New Jersey: :  
Corporation, : HONORABLE JOSEPH E. IRENAS :  
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 :  
Plaintiffs, :  
 : CIVIL ACTION NO. 05-538 (JEI/JS)  
v. :  
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 :  
COMPOSITES ONE LLC, a Foreign : **OPINION**  
Limited Liability Company; :  
CURRAN COMPOSITES, INC., a :  
Missouri Corporation; C TWO :  
LLC, a Foreign Limited :  
Liability Company; and TOTAL :  
COMPOSITES, INC., a Delaware :  
Corporation joint d/b/a/ COOK :  
COMPOSITES AND POLYMERS, a :  
fictitiously named Delaware :  
Partnership, :  
 :  
 :  
Defendants. :

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**IRENAS**, Senior District Judge:

Presently before the Court is the Motion by Defendant Cook Composites and Polymers ("CCP") to Exclude the Opinions and Testimony of James M. Caruthers, Ph.D. For the reasons set forth below, the Motion will be granted in part and denied in part.

## I.

The facts of this case have been set-out in several previous opinions<sup>1</sup> and need not be fully repeated here. At issue in this Motion are the expert report and testimony of James M. Caruthers, Ph.D.,<sup>2</sup> pertaining to the laboratory testing and chemical composition of 953 Series gel.

Caruthers offers three interrelated opinions, as follows:

1. The laboratory testing of the flexibility of the gel coat resins as reported in the CCP documents is flawed.
2. None of the laboratory testing of the CCP resins addressed the critical use condition, which included long term UV exposure, long term exposure to air and subambient deformation of the gel coat.
3. The formulation of the 953 gel coat is flawed due to the presence of the adipic acid and the absence of the UV stabilizer, leading to degradation over time of the

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<sup>1</sup> See *Viking Yacht Co., et al. v. Composites One LLC, et al.*, No. 05-538, 2008 WL 5244411 (D.N.J. Dec. 16, 2008); *Viking Yacht Co., et al. v. Composites One LLC, et al.*, No. 05-538, 2007 WL 2746713 (D.N.J. Sept. 18, 2007); *Viking Yacht Co., et al. v. Composites One LLC, et al.*, 496 F.Supp.2d 462 (D.N.J. 2007); see also *Viking Yacht Co. v. Composites One LLC*, --- F.Supp.2d ---, 2009 WL 1111207 (D.N.J. Apr. 27, 2009).

<sup>2</sup> CCP does not challenge Caruthers's qualifications as an expert, thus it is unnecessary to recite his credentials at length. It is sufficient to note that he is a Professor of Chemical Engineering, holds a Ph.D. in Chemical Engineering from the Massachusetts Institute of Technology, and has numerous publications and presentations to his credit. (See Jones Cert. Ex. 1--Caruthers Biographical Note).

flexibility of the 953 gel coat.

(Jones Cert. Ex. 1-- Caruthers Report).

Caruthers views the field performance of Plaintiffs' yachts as an "experiment"--conducted in the real world.<sup>3</sup> (See Caruthers Dep. at 190:7-191:20). Asked to determine the cause of Plaintiffs' gel coat cracking, Caruthers began by ruling out possible causes. (See Caruthers Dep. at 94:18-95:3). Relying on information supplied by Viking and Post personnel, Caruthers learned that "there was no change in the design, manufacturing and use of the boats that were built during the time period prior to and during the appearance of the gel coat cracks."<sup>4</sup> (Caruthers Rpt. at p. 2; see Caruthers Dep. at 95:4-97:8, 115:12-116:4). Thereafter, Caruthers focused on the 953 Series gel as the likely source of the cracking, "[b]ased on the fact that all

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<sup>3</sup> Caruthers testified that an experiment can be structured either "to test a hypothesis" or by performing the experiment first, and then "try[ing] to analyze what the results were[.]" (Caruthers Dep. at 190:22-191:3). Here, according to Caruthers, the field experience of Plaintiffs' yachts amounted to an experiment without "a hypothesis up front." (Caruthers Dep. at 191:4-5). If there were a hypothesis, opined Caruthers, "it was that [953 Series gel] resin should work in the field." (Caruthers Dep. at 191:5-7).

<sup>4</sup> Caruthers did not independently verify that these variables were held constant; he accepted the representations of Plaintiffs' personnel. When asked how his opinion would be affected if some of the factors he relied upon were not held constant, he responded as follows: "I would have to look in detail of what happened at that point. I don't think it would change the opinion about the problem in changing the chemical composition of the material." (Caruthers Dep. at 195:1-15).

For related reasons, the experience of Performance Cruising's boats with 953 Series gel was irrelevant to Caruthers's analysis. As Caruthers explained, Performing Cruising's trimarans and catamarans are entirely different types of boats from the power yachts used by Plaintiffs. (Caruthers Dep. at 209:3-212:14). Thus, the "constant" factors relied upon by Caruthers in reaching his conclusions are absent, as between Performing Cruising's boats and Plaintiffs' yachts. (See id.)

the other variables had been held constant.” (Caruthers Dep. at 117:18-118:4; see Caruthers Rpt. at p. 2 (“The only difference [in the yachts] was the use of 953 in the boats that exhibited gel coat cracking [versus] 952 in the boats that did not exhibit gel coat cracking.”)).

Caruthers then pinpointed two differences in chemical composition between the 953 Series and 952 Series gels as the cause of gel coat cracking on Plaintiffs’ yachts. (See Caruthers Dep. at 186:21-187:3 (“My opinion is that the source of the cracking . . . was due to a change in the chemical composition of the 953 resin.”)). First, the 953 Series gel included adipic acid, whereas the 952 Series did not. (Caruthers Rpt. at p. 3). Second, the 953 Series did not include a UV stabilizer; the 952 Series did. (Id.)

Adipic acid is an aliphatic diacid, a type of material generally recognized to suffer from thermo-oxidative and ultraviolet degradation, the ultimate result of which is less flexibility.<sup>5</sup> (Caruthers Rpt. at p. 3). Caruthers did not conduct a laboratory experiment to confirm that 953 Series gel experienced these forms of degradation. (Caruthers Dep. 252:6-11). Such testing was unnecessary, he testified, because it is a matter of general knowledge to practitioners in his field that

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<sup>5</sup> Caruthers’s appraisal of 953 Series gel pertains to its performance in the field, over a period of time. (Caruthers Dep. at 247:14-23). He acknowledged that adipic acid may result in improved flexibility in the short-term. (Caruthers Dep. at 199:19-24).

"aliphatics are more susceptible to UV and thermo-oxidative degradation than aromatic groups." (Caruthers Dep. at 250:8-12).

Caruthers also concluded that the 953 Series gel is defective because it does not include a UV stabilizer.<sup>6</sup> (Caruthers Rpt. at p. 3). Caruthers did not test the effect of adding UV stabilizer to 953 Series gel, deeming such a test unnecessary in light of the field experience of Plaintiffs' yachts. (Caruthers Dep. at 275:17-276:5). Caruthers does not opine whether it is the presence of adipic acid, absence of UV stabilizer, or some combination thereof that ultimately caused the 953 Series gel to crack. (Caruthers Dep. at 276:6-18).

In addition, Caruthers criticized CCP's laboratory testing procedures, which were the means by which CCP measured the elongation of its gels. Elongation is a measure of flexibility; the greater the flexibility, the lower the risk of gel coat cracking. *Viking Yacht*, 496 F.Supp.2d at 467 n.11, 472.<sup>7</sup>

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<sup>6</sup> Caruthers's report and deposition testimony do not define what a UV stabilizer is with any precision. In context, however, it is clear that Caruthers regards a UV stabilizer as a chemical that helps prevent the degradation in flexibility that is normally caused by ultraviolet light. (See Caruthers Rpt. at p. 3). That proposition was challenged by defense counsel during Caruthers's deposition. Therein, Caruthers was asked whether a UV stabilizer would have had minimal utility if added to the 953 Series gel, because 953 Series gel included titanium dioxide. (Caruthers Dep. at 267:17-268:2). Caruthers acknowledged some reported situations indicating that a UV stabilizer can be antagonistic in a compound that also includes titanium dioxide. (Caruthers Dep. at 267:1-10). However, he stood by his finding that the absence of a UV stabilizer and the presence of adipic acid in 953 Series gel were responsible for the cracking experienced by Plaintiffs' yachts. (Caruthers Dep. 275:17-276:10).

<sup>7</sup> CCP initially published test results indicating that the 952 Series' elongation is between 1.1% and 1.5%, whereas the 953 Series' elongation is between 1.3% and 1.7%. *Viking Yacht*, 496 F.Supp.2d at 472. Data published in

As explained by Caruthers, CCP's elongation tests were performed on "a thin strip of material that was prepared without the laminate substructure[,]" meaning a material without the characteristics of the inner layers of Plaintiffs' yachts.<sup>8</sup> (Caruthers Rpt. at p. 2). A related shortcoming, according to Caruthers, is the lack of any testing by CCP to demonstrate that the results of its flexibility tests reflect how the gel will perform once bonded with a laminate. (Id.) For these reasons, Caruthers states that "the test data reported [by] CCP where they purport that 953 is more flexible is without scientific basis." (Id.)

As stated above, Caruthers believes that 953 Series gel becomes less flexible after exposure to the elements. In light of the absence of testing by CCP to measure the long-term flexibility of 953 Series gel in field conditions,<sup>9</sup> Caruthers opines that "[CCP's] claim that the gel coat had acceptable or

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2002 indicated that the elongation range of 953 Series gel is between 1.2% and 1.4%. The 952 Series gel was not among the gels for which data was reported in 2002. (See Jones Cert. Ex. 5).

<sup>8</sup> An earlier filing by Plaintiffs describes the process by which Plaintiffs bond gel coating to the underlying laminate in constructing their yachts. (See Dkt. No. 108-- Pls. Opp. Br. to Def. S.J. Mot. (Jul. 11, 2007)). Plaintiffs construct yachts in layers, using a mold. (Id. at 1). The first step in the building process is to create the outermost layer of gel coat; the gel is sprayed onto the mold, where it hardens. (Id.) Fiberglass matting is mixed with liquid resin, and then laid over or sprayed onto the hardened gel coat. (Id.) The fiberglass and resin chemically react and bond to the gel coat, forming an inner layer. (Id.) Gel coat provides a cosmetic finish, color, and a barrier against damage to the underlying laminate. (Id.)

<sup>9</sup> Caruthers testified that it is possible to perform such a test. (See Caruthers Dep. at 223:6-224:10).

improved weathering characteristics is without scientific basis."

(Id.)

Importantly, Caruthers explained that his report should not be understood to suggest that there are inaccuracies in any of the flexibility data reported by CCP:

Q: And it's not your contention or your opinion in this case that any of the test results reported by CCP . . . are inaccurate or false, right?

A: No. I believe they -- the numbers they measured were the numbers that went with that particular test and that material. Whether that was relevant is the key question.

Q: But you don't believe that the numbers recorded in any of the test results that have been produced or published in this case in product literature by CCP or otherwise are false or inaccurate?

A: I don't believe so. I have no evidence to the contrary.

Q: You have no evidence that they're inaccurate?

A: That's correct.

(Caruthers Dep. at 221:22-222:19).

Caruthers did not perform flexibility testing on 953 Series gel, either in an attempt to replicate CCP's results, or to test flexibility of the gel under Plaintiffs' use conditions. (See Caruthers Dep. at 222:20-223:14).

CCP moves to exclude Caruthers's expert report and attendant testimony at trial.

## **II.**

Federal Rule of Evidence 702 provides,

[i]f scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise, if (1) the testimony is based upon sufficient facts or data, (2) the testimony is the product of reliable principles and methods, and (3) the witness has applied the principles and methods reliably to the facts of the case.

"Rule 702 has three major requirements: (1) the proffered witness must be an expert, i.e., must be qualified; (2) the expert must testify about matters requiring scientific, technical or specialized knowledge; and (3) the expert's testimony must assist the trier of fact." *Pineda v. Ford Motor Co.*, 520 F.3d 237, 244 (3d Cir. 2008) (Irenas, S.D.J., sitting by designation) (internal citations omitted). As to the second requirement, the Third Circuit has stated that "an expert's testimony is admissible so long as the process or technique the expert used in formulating the opinion is reliable." *Id.* (internal citations and quotations omitted). The third element requires the expert's testimony to "'fit' the factual dispute at issue so that it will assist the jury." *Saldana v. Kmart Corp.*, 260 F.3d 228, 232 (3d Cir. 2001).

*Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993), instructs that the district court must act as a gatekeeper, "'ensuring that an expert's testimony both rests on a reliable foundation and is relevant to the task at hand.'" *Kumho*



*Tire Company, Ltd. v. Carmichael*, 526 U.S. 137, 141 (1999) (quoting *Daubert*). “Rule 702, which governs the admissibility of expert testimony, has a liberal policy of admissibility.” *Pineda*, 520 F.3d at 243.

### III.

The parties parse Caruthers’s opinions into two distinct categories: (1) those regarding the laboratory testing of 953 Series gel and (2) his opinion pertaining to the chemical composition of the gel. The Court is not persuaded that drawing such a distinction is proper. Whether styled as three opinions or one, the entirety of Caruthers’s proposed testimony rests on a single determination – that the chemical composition of 953 Series gel renders it susceptible to thermo-oxidative and ultraviolet degradation over time. When such degradation occurs, reduced flexibility results.<sup>10</sup> Caruthers’s opinions concerning CCP’s laboratory testing are simply a logical extension of that determination; if 953 Series gel loses flexibility over time, a laboratory test that does not account for long-term performance under Plaintiffs’ use conditions would not measure that change.

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<sup>10</sup> CCP’s expert, A. Brent Strong, also recognizes the propensity of “all polymeric materials [to] degrade over time[.]” (Jones Cert. Ex. 6-- Strong Report at ¶ 35). Strong, however, contends that the addition of adipic acid to 953 Series gel resulted in a higher degree of flexibility, as compared to 952 Series gel. (See *id.* at ¶¶ 42-52, 89). In addition, Strong states that a UV stabilizer was unnecessary to the 953 Series gel because the formula already included titanium dioxide, a UV reflector. (*Id.* at ¶ 81). According to Strong, a UV stabilizer would have a negligible, or possibly an antagonistic, effect in the presence of titanium dioxide. (*Id.*) Strong concludes that “Dr. Caruthers is incorrect in his assertion that the formulation [of 953 Series gel] is flawed.” (*Id.* at ¶ 89).

Therefore, the analysis that follows proceeds from the premise that Caruthers's findings are, in essence, one opinion.

Plaintiffs propose to introduce Caruthers's opinions to demonstrate the "causal relationship between the 953 formula and its premature cracking[.]" (Pls. Br. 37). In addition, Plaintiffs intend to offer his testimony to establish that the flexibility test results published by CCP are meaningless once the gel is used for a period of time.<sup>11</sup> (Pls. Br. 39). CCP assails Caruthers's proposed testimony as unreliable and irrelevant to disputed factual issues.

The Court will address CCP's challenges to the reliability of the data and methodology underlying Caruthers's opinion in sections A and B, respectively. In Section C, the Court will consider the "fit" of Caruthers's testimony to disputed issues of fact.

#### **A.**

CCP argues that Caruthers was not justified in relying on the representations of Plaintiffs' personnel as the source of data essential to his analysis.<sup>12</sup> Thus, CCP maintains that

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<sup>11</sup> Plaintiffs do not intend to offer Caruthers's testimony to prove that any of the test results reported by CCP were false.

<sup>12</sup> In addition, CCP contends that Caruthers's analysis was flawed because he failed to engage in various forms of comparative testing between yachts suffering cracking and those that did not. For example, CCP argues Caruthers should have determined whether yachts experiencing cracking had experienced greater ultraviolet light exposure than yachts that did not experience cracking. From Caruthers's report and deposition testimony, it is apparent that he deemed such studies unnecessary, because he accepted Plaintiffs' representations that the use of the yachts remained constant.

Caruthers's opinion is unreliable because he incorporated unreliable data into his methodology when he accepted Plaintiffs' representations that the design, manufacturing processes, and consumer use of the yachts remained constant over the relevant time period.

CCP's challenge to the reliability of the data underlying Caruthers's opinion implicates Federal Rule of Evidence 703. Rule 703 provides, in relevant part:

The facts or data in the particular case upon which an expert bases an opinion or inference may be those perceived by or made known to the expert at or before the hearing. If of a type reasonably relied upon by experts in the particular field in forming opinions or inferences upon the subject, the facts or data need not be admissible in evidence in order for the opinion or inference to be admitted.

To determine whether "an expert's data is of a type reasonably relied on by experts in the field," the Court must "assess whether there are good grounds to rely on this data to draw the conclusion reached by the expert." *Montgomery County v. Microvote Corp.*, 320 F.3d 440, 448 (3d Cir. 2003) (internal quotation marks and citation omitted). "If the data underlying the expert's opinion are so unreliable that no reasonable expert could base an opinion on them, the opinion resting on that data must be excluded." *Id.* (internal quotation marks omitted).

In this case, it is undisputed that Caruthers eliminated a number of possible causes of gel coat cracking by soliciting information from Plaintiffs' personnel. That underlying data was

gleaned from sources with knowledge of the answers to Caruthers's questions. In all likelihood, Viking and Post personnel were the only sources both available to Caruthers and familiar with the information he was seeking. Thus, the Court concludes that the representations by Plaintiffs' personnel were sufficiently reliable to permit Caruthers to incorporate that data into his analysis. CCP, of course, will have an opportunity to explore these issues via cross-examination.

**B.**

Pursuant to the second requirement of Rule 702, "an expert's testimony is admissible so long as the process or technique the expert used in formulating the opinion is reliable." *Pineda*, 520 F.3d at 247 (quoting *In re Paoli R.R. Yard PCB Litig.*, 35 F.3d 717, 742 (3d Cir. 1994)) (internal quotation marks omitted). The proponent of expert testimony must "make more than a prima facie showing that his expert's methodology is reliable," *id.*, but "[t]he evidentiary requirement of reliability is lower than the merits standard of correctness." *Id.* (quoting *Paoli*, 35 F.3d at 744) (alteration in original) (internal quotation marks omitted).

Factors relevant to whether an expert's methodology is sufficiently reliable include, but are not limited to:

- (1) whether a method consists of a testable hypothesis;
- (2) whether the method has been subject to peer review;
- (3) the known or potential rate of error; (4) the existence and maintenance of standards controlling the technique's operation; (5) whether the method is generally accepted; (6) the relationship of the technique

to methods which have been established to be reliable;  
(7) the qualifications of the expert witness testifying  
based on the methodology; and (8) the non-judicial uses  
to which the method has been put.

*Id.* at 247-48 (citing *Paoli*, 35 F.3d at 742 n.8). These factors,  
however, "are neither exhaustive nor applicable in every case."

*Id.* at 248.

Plaintiffs argue that Caruthers employed "a reliable method  
of analysis known as 'differential diagnosis[,]' " which,  
according to Plaintiffs, "qualifies as 'generally accepted' under  
the *Paoli* standards." (Pls. Br. 19). Although Caruthers does  
not explicitly refer to his method as "differential diagnosis,"  
the Court recognizes that Caruthers's method generally involved  
"ruling out" potential causes of gel coat cracking and "ruling  
in" the chemical composition of 953 Series gel as the  
culprit—resembling how a differential diagnosis is performed to  
determine the cause of an illness in the medical context. See  
*Feit v. Great West Life and Annuity Ins. Co.*, 271 F.App'x 246,  
254 (3d Cir. 2008).

CCP argues that Caruthers's testimony must be excluded  
because he did not conduct any laboratory tests in support of his  
findings. Caruthers confronted this criticism during his  
deposition; he explained that some experiments are conducted in  
laboratories, but an experiment "can be done outside of the  
laboratory[,]" (Caruthers Dep. at 190:10-11), as was done in this  
case. Clearly, Caruthers's conception of an experiment does not

comport with that of CCP. At the same time, the Court can discern no reason that an experiment cannot begin by identifying a result of uncertain origin and work backwards to determine its cause.

In a related argument, CCP contends that the record is devoid of a basis for Caruthers to assume that 953 Series gel exhibited greater degradation in flexibility than 952 Series gel. Caruthers, however, did not ground his analysis on such an assumption. Caruthers began his study from the proposition that the yachts experienced gel coat cracking due to an unknown cause, which he was asked to identify.

By consulting with Viking and Post personnel, Caruthers determined that there had been no systemic change in the design, manufacturing processes, or customer use of the yachts. The lone identifiable difference between yachts experiencing gel coat cracking, and those that did not, was the use of 953 Series gel rather than 952 Series gel. This suggested the cracking might be related to the change in gel coat formula.<sup>13</sup>

Based on his specialized scientific knowledge, Caruthers recognized that the chemical composition of 953 Series gel rendered it susceptible to degradation in flexibility, thereby explaining the gel coat cracking. Thus, it is Caruthers's

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<sup>13</sup> This is not a case in which Plaintiffs began experiencing engine failures following their change to 953 Series gel coat and attributed those problems to the new gel coat.

conclusion, not his assumption, that 953 Series gel was the cause of the cracking.<sup>14</sup>

CCP also challenges Caruthers's methodology for failing to satisfy the various indicia of reliability under Rule 702, most recently articulated in *Pineda*. In considering this argument, the Court is mindful that the Rule 702 inquiry is "a flexible one[,]" and the factors identified in *Daubert* "do not constitute a definitive checklist or test." *Kumho Tire Co., Ltd. v. Carmichael*, 526 U.S. 137, 150 (quoting *Daubert*, 509 U.S. at 593-94) (internal quotation marks omitted).

The method employed by Caruthers is testable, and his findings are replicable. An expert familiar with the propensities of chemicals could analyze whether the substitution of gel coating with adipic acid and without UV stabilizer for one without adipic acid and with UV stabilizer is the cause of gel coat cracking on yachts, assuming no changes in the design, manufacturing processes, or consumer use of those yachts. Caruthers thought it unnecessary to demonstrate what he deemed a self-evident proposition via laboratory testing. That does not preclude another scientist, less convinced that the result of

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<sup>14</sup> It may be true that Caruthers's conclusion would be more strongly supported if he had confirmed his conclusions regarding 953 Series gel via a laboratory experiment. However, the Third Circuit has been clear that an expert's testimony resting on "good grounds" is admissible, "even if the judge thinks that there are better grounds for some alternative conclusion, and even if the judge thinks that a scientist's methodology has some flaws such that if they had been corrected, the scientist would have reached a different result." *In re Paoli R.R. Yard PCB Litig.*, 35 F.3d 717, 744 (3d Cir. 1994).

such a test is a foregone conclusion, from performing it. Although Caruthers did not identify a hypothesis as such, his analysis had an articulable goal – to identify the cause of the gel coat cracking experienced by Plaintiffs' yachts.

Caruthers did not reach his conclusions haphazardly or unbounded by standards. He was asked to determine the cause of a result; he employed a process of elimination to isolate the likely cause of that result; and then applied elementary principles of chemistry to confirm that the likely cause of the result was, in fact, the actual cause. Such a method of problem solving is not novel or confined to use for the purposes of litigation. Moreover, Caruthers's familiarity with the propensities of adipic acid and UV stabilizers was not obtained for use in this litigation – it is specialized knowledge about a factual issue presented by the current litigation.

In sum, the Court is satisfied that Caruthers's testimony should be admitted, based on the liberal policy of admissibility embodied by Rule 702, and the good, although not flawless, grounds for his conclusions. Cross-examination will suffice to test Caruthers's opinion before the jury.

Via reply brief, CCP contends that Caruthers's testimony must be excluded because it is indistinguishable from that of an expert in *Fuesting v. Zimmer, Inc.*, 421 F.3d 528 (7th Cir.



2005).<sup>15</sup> *Fuesting* involved the failure of an artificial knee, resulting in a lawsuit against its manufacturer. *Fuesting*, 421 F.3d at 531. Plaintiff's expert testified that the knee failed because it was sterilized via a process known as "gamma irradiation in an air environment[.]" *Id.* at 531-32. The expert attributed his opinion to basic polymer science principles. *Id.* at 536. The trial court failed to conduct any meaningful *Daubert* analysis, *id.* at 534-35, resulting in the Seventh Circuit panel assuming the responsibility of performing its own *Daubert* analysis. *See id.* at 536-37. In doing so, the panel criticized the expert for failing to conduct scientific testing to confirm his theory of causation, which was apparently without any published support in the scientific community. *See id.* at 536-37. Also, the panel found that the expert's opinion did not explain how general principles could result in his causation conclusions. *Id.* at 536. Less clear, in *Fuesting*, was whether the expert adequately accounted for alternative causes of the knee implant's failure. *Id.* at 537 ("[T]here is some genuine disagreement as to whether [the expert] has adequately accounted for alternative causes of the implant's failure . . . .").

Here, the Court has determined that Caruthers's method for ruling out alternative gel coat cracking causes was sufficiently reliable – namely, obtaining information from knowledgeable

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<sup>15</sup> *Vacated in part on other grounds*, 448 F.3d 936 (7th Cir. 2006).

witnesses. Unlike the expert in *Fuesting*, Caruthers relies upon the existence of published support for the proposition that adipic acid is susceptible to thermo-oxidative and UV degradation.<sup>16</sup>

During his deposition, Caruthers described, in scientific terms, the precise chemical process through which a compound such as adipic acid becomes more brittle, and hence less flexible. (See Caruthers Dep. at 250:13-253:5). Thus, the Court is satisfied that Caruthers has offered a sufficiently reliable explanation for how general principles of polymer science lead to his particular conclusions. In line with the Seventh Circuit, the Court agrees that Caruthers's opinion might be strengthened by conclusive confirmation in a laboratory setting. However, as discussed above, the reliability of his opinion is not substantially weakened by merely electing not to perform a laboratory experiment which he deemed redundant. The reliability inquiry in this case is therefore not controlled by *Fuesting*.

### C.

CCP contends that Caruthers's opinion identifying the 953

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<sup>16</sup> (See Caruthers Dep. at 249:9-250:12 ("Q: And it's your claim, your contention, that the adipic acid exhibits a higher rate of thermo-oxidative degradation and UV degradation; is that right? A: Aliphatics do that. Because I know aliphatics do - Q: What is - your basis for that statement is your general knowledge? A: Correct. Q: Is there references - are there references in literature to which you can point me for that proposition? A: Without question. Q: Can you do it as you sit here today? A: No. Q: It's such a basic and straightforward proposition that you didn't feel the need to elaborate on it? A: Anyone who practices in this field knows that aliphatics are more susceptible to UV and thermo-oxidative degradation than aromatic groups.")).

Series gel as the cause of cracking should not be admitted because it does not "fit" disputed factual issues. This position is somewhat perplexing insofar as CCP's opposition brief regarding the Motion to Exclude A. Brent Strong's testimony explains that "it is Plaintiffs' burden . . . to establish what caused the cracking in their yachts." (Dkt. No. 166, at 24).

Nevertheless, CCP contends that Caruthers's opinion does not fit disputed factual issues because he failed to isolate whether it was the presence of adipic acid, absence of UV stabilizer, or some combination thereof that accounted for the gel coat cracking. The Court disagrees. The factfinder may be called upon to determine whether 953 Series gel was the cause of cracking, but will not be asked to consider what aspect of the chemical composition of 953 Series gel was more or less at fault.

Also, CCP argues Caruthers's opinion is irrelevant because it pertains to the performance of 953 Series gel over time. Insofar as CCP is suggesting that events occurring after the date the 953 Series gel was delivered are wholly irrelevant in the wake of this Court's summary judgment opinion, they are mistaken. The Court previously explained that the express warranty for "improved flexibility" is vague, *Viking Yacht*, 496 F.Supp.2d at 470, and thus the determination of the warranty's contours, and

whether it was breached, are issues for the jury.<sup>17</sup> See *id.* ("A reasonable jury could find that a warranty for improved flexibility does not include a warranty against cracking after use and/or storage in cold climates by the end purchaser of the yachts.").

Finally, CCP contends that Caruthers should be barred from testifying that CCP's flexibility tests are flawed. The Court disagrees. The flaw, according to Caruthers, is the tests' inability to predict the performance of the 953 Series gel once it is used for a period of time in field conditions. Caruthers's testimony on this point is particularly relevant in light of the anticipated testimony by A. Brent Strong, CCP's expert, that CCP's laboratory tests were a reliable means of measuring gel coat flexibility. It is therefore appropriate for Caruthers to explain to the jury that CCP's tests are not tailored to measure the long-term flexibility of 953 Series gel under Plaintiffs' use conditions. The testimony of both experts will provide the jury with a complete picture of both the significance and the limitations of CCP's testing procedure.

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<sup>17</sup> CCP also relies on this Court's previous conclusion that the express warranty embodied in PB-58 "does not extend to future performance." See *Viking Yacht*, 496 F.Supp.2d at 470. That language, however, was directed towards determining when Plaintiffs' express warranty cause of action accrued for statute of limitations purposes. See *id.* This Court explained that, under New Jersey statute, a cause of action for breach of warranty accrues when delivery is tendered, unless the warranty "explicitly extends to future performance[.]" *Id.* In this case, the warranty did not explicitly extend to future performance, hence Plaintiffs' breach of express warranty claims accrued upon delivery of the 953 Series gel. *Id.*

That said, Caruthers's description of CCP's flexibility testing as "flawed" is something of a misnomer. Likewise, his appraisal of the results of those tests as "without scientific basis" is misleading. Describing CCP's tests and data in such language would imply to the jury that the tests were performed improperly or yielded inaccurate results – neither of which Caruthers actually suggests. Therefore, the Court will preclude Caruthers from referring to CCP's laboratory tests, or the data gleaned therefrom, as "flawed," "defective," "without scientific basis," et cetera. Such terms are misleading, and obscure the true thrust of Caruthers's testimony – specifically, that CCP's tests were not designed to measure the long-term flexibility of gel coating in field conditions, and thus the data produced by those tests would not account for any diminished flexibility that occurs over time.

#### **IV.**

In light of the foregoing, CCP's Motion to Exclude the Opinions and Testimony of James M. Caruthers, Ph.D. will be granted in part and denied in part. The Court will issue an appropriate order.

Dated: May 12th, 2009

s/ Joseph E. Irenas  
**JOSEPH E. IRENAS, S.U.S.D.J.**